

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A multi-mode wireless device on a single substrate, comprising:

an integrated circuit having an analog portion integrated on the substrate, comprising:

a cellular radio core;

a radio sniffer coupled to the cellular radio core; and

a short-range wireless transceiver core coupled to the cellular radio core; and

the integrated circuit having a digital portion integrated on the substrate, comprising:

a reconfigurable processor core coupled to the cellular radio core and the short-range wireless transceiver core, the reconfigurable processor core having multiple central processors and multiple digital signal processors, the reconfigurable processor core configured to handle a plurality of wireless communication protocols; and

a memory array coupled to the reconfigurable processor core.

Claim 2 (previously presented): The wireless device on a single substrate of claim 1, wherein at least one of the wireless communication protocols conforms to a Bluetooth™ or IEEE802.11 protocol.

Claim 3-6 (cancel)

Claim 7 (original): The wireless device on a single substrate of claim 1, wherein the reconfigurable processor core includes one or more reduced instruction set computer (RISC) processors.

Claim 8 (previously presented): The wireless device on a single substrate of claim 1, further comprising a router coupled to the reconfigurable processor core, the cellular radio core, and the short-range wireless transceiver core.

Claim 9 (currently amended): The wireless device on a single substrate of claim 8, wherein the router further comprises an engine configured to track the destinations of packets and send them in parallel through a plurality of separate pathways.

Claim 10 (currently amended): The wireless device on a single substrate of claim 8, wherein the router is configured to send packets in parallel through a primary and a secondary communication channel.

Claim 11 (currently amended): A portable computer system, comprising:

a processor;

a multi-mode wireless device integrated circuit formed on a single substrate coupled to the processor, the device integrated circuit comprising:

an analog portion integrated on the substrate, including:

a cellular radio core; and

a short-range wireless transceiver core; and

a digital portion integrated on the single substrate, including:

a reconfigurable processor core coupled to the cellular radio core and the short-range wireless transceiver core, the reconfigurable processor core configured to handle a plurality of wireless communication protocols; and

a memory array coupled to the reconfigurable processor core;

a program storage device coupled to said processor; and

an input recognizer embodied in said program storage device, said input recognizer configured to receive input from a user.

Claim 12 (previously presented): The portable computer system of claim 11, wherein one of the wireless communication protocols conforms to a Bluetooth™ protocol.

Claims 13-15 (cancel)

Claim 16 (original): The portable computer system of claim 11, wherein the reconfigurable processor core includes one or more digital signal processors (DSPs).

Claim 17 (original): The portable computer system of claim 11, wherein the reconfigurable processor core includes one or more reduced instruction set computer (RISC) processors.

Claim 18 (original): The portable computer system of claim 11, further comprising a router coupled to the processor, the cellular radio core, and the short-range wireless transceiver core.

Claim 19 (currently amended): The portable computer system of claim 18, wherein the router further comprises an engine configured to track the destinations of packets and send them in parallel through a plurality of separate pathways.

Claim 20 (currently amended): The portable computer system of claim 18, wherein the router is configured to send packets in parallel through a primary and a secondary communication channel.

Claim 21 (currently amended): A method comprising:
communicating data via a cellular radio medium using a multi-mode wireless ~~device~~ integrated circuit having a substrate including a cellular radio core, a short-range wireless transceiver core, and a processor core; and

communicating data via a short-range wireless medium using the multi-mode wireless ~~device~~ integrated circuit.

Claim 22 (previously presented): The method of claim 21, further comprising communicating data in parallel through the cellular radio medium and the short-range wireless medium.

Claim 23 (previously presented): The method of claim 22, further comprising primarily communicating the data via a primary communication channel and periodically communicating the data via a secondary communication channel.

Claim 24 (previously presented): The method of claim 21, further comprising communicating data via the short-range wireless medium while in a local area network and communicating data via the cellular radio medium while outside the local area network.

Claim 25 (previously presented): The method of claim 24, further comprising powering down the short-range wireless transceiver core while communicating data via the cellular radio medium.

Claim 26 (previously presented): The method of claim 21, further comprising searching for a short-range wireless medium signal during an idle time of the cellular radio core.

Claim 27 (previously presented): The method of claim 26, further comprising transmitting a deregistration message to a cellular system if the short-range wireless medium signal is found.

Claim 28 (cancel)

Claim 29 (new): The method of claim 21, further comprising transmitting data packets in parallel through the cellular radio medium and the short-range wireless medium.